Section of Obstetrics and Gynæcology

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[*January* 22, 1954]

Dysgerminoma of the Ovary.—ALICE BLOOMFIELD, F.R.C.S.

This patient, Miss C., aged 21, single, was referred to me by her private doctor on 12.11.43, with the complaint of acute abdominal pain occurring some two weeks before and accompanied by vaginal hæmorrhage.

The patient looked ill and pale. On abdominal examination there was some distension, and a tender somewhat elastic tumour was present arising from the pelvis on the right side. On vaginal examination, the uterus could be felt pushed forwards and to the left by a tumour arising from the right side of the pelvis.

Laparotomy was performed on 16.11.43 when a large soft tumour was found replacing the right ovary and very adherent to the pouch of Douglas.

This was removed and the rather free bleeding controlled by hot gauze packs. The uterus and left ovary were normal and were left in situ.

Microscopic examination showed this to be a dysgerminoma of the ovary, the tumour consisting of characteristic large rounded clear cells arranged in alveoli or nests, separated by septa of fibrous material showing more or less hyalinization, and, quite constantly, the extensive lymphocytic infiltration common in these tumours.

As the tumour was considered to be very anaplastic and malignant, it was decided after considerable hesitation to give the patient deep X-rays which were carried out at the Marie Curie Hospital. These were given by four portals of entry between 13.12.43, and 7.1.44, the total skin dose being 9,200 r. The patient has remained well ever since.

Endometriosis Including Endometriosis of the Diaphragm and Meigs' Syndrome.—ALAN BREWS, F.R.C.O.G.

The patient was a married woman, aged 39, who presented with gross ascites and a total right pleural effusion and who was ultimately shown to have diffuse abdominal endometriosis with multiple foci in the peritoneum and widespread involvement of the right side of the diaphragm with a small communication through it between the peritoneal and right pleural cavities.

The patient has enjoyed excellent health for three and a half years following the irradiation of her ovaries to create an artificial menopause.

Cystic Endometrioma of the Uterus.—DOREEN DALEY, M.D., F.R.C.S.Ed., M.R.C.O.G.

A single woman, aged 34, working as a housemaid, first attended hospital on 20.4.53 complaining of blood-stained vaginal discharge for the past ten weeks.

The *menstrual history* was that her periods started at the age of 13 and she had continued to lose regularly for three to four days each month until 6.2.53, when menstruation began normally but was followed by slight bleeding which had continued. The loss was never heavy and no clots had been passed. There was no history of dysmenorrhœa but, since the abnormal bleeding started, she had noticed slight aching across the lower abdomen. The *past history* was negative and on *symptomatic enquiry* she stated that she had not noticed any change in micturition, bowel habit, weight or abdominal size. She felt very well except for slight dyspnœa on exertion.

Examination showed a pale but otherwise healthy-looking woman. Palpation of the *abdomen* showed a hard, irregular rounded mass rising from the pelvis near the umbilicus. It was slightly tender and mobility was limited. There was no evidence of ascites or liver enlargement. Slight red loss was noted on *vaginal examination* and the mass felt abdominally was found to be continuous with an irregular pelvic mass from which the uterus could not be differentiated. The cervix felt normal.

The most likely *diagnosis* appeared to be uterine fibroids but in view of the prolonged bleeding and the chance that the tumour might be a malignant ovarian neoplasm, early admission to hospital was arranged. When she came in on 5.5.53, she said that the bleeding had ceased three days previously. General examination was essentially negative except for anæmia (hæmoglobin 53%). In

view of her age, conservative surgery was planned if the tumour was innocent and if technically feasible but she was asked to give consent for hysterectomy if it was considered desirable. She willingly agreed to this, adding that she would prefer it to any risk of recurrence of trouble later on. Before laparotomy she was given a blood transfusion and also examined under anæsthesia to rule out uterine malignancy. The findings were a normal cervix and a normal uterine cavity with metropathic curettings. The main tumour appeared to arise from the fundus uteri. When the abdomen was opened on 11.5.53, no ascites was seen and a large polycystic tumour presented in the wound. This was taken to be an ovarian tumour until closer inspection showed that it arose from a broad pedicle near the fundus of an apparently normal uterus. The appendages looked normal except for some small follicular cysts in the ovaries. In view of the doubtful nature of the tumour, the fact that she did not mind losing her uterus and, in any case, suffered from metropathia hæmorrhagica that might be recurrent, pelvic clearance was performed. During convalescence and subsequent follow-up, she did well.

Pathology.—I am indebted to Dr. Magnus Haines for the following pathological reports on the specimen which was sent to him uncut for the Rare Tumour Registry:

Macroscopical.—The uterus measures 6 × 4 × 4 cm. and attached to the left posterior wall by a short pedicle, 3·5 cm. thick, there is a polycystic tumour 16 cm. in diameter. Two small subserous cysts are present on the anterior wall and a few more on the posterior surface. The interstitial portion of the right tube shows altered blood and the ovary simple cysts (Fig. 1).

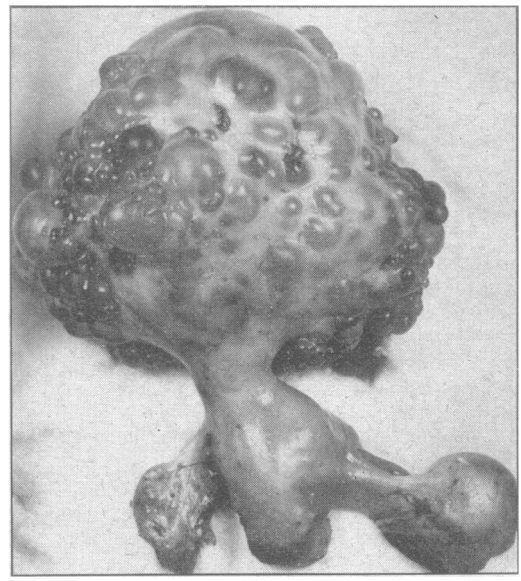

Fig. 1.

Microscopical.—The peritoneal surface of the *uterus* shows a small endometrial cyst. The endometrium is atrophic and cystic. The *tumour* is composed of numerous cysts of varying size, set in fibromuscular tissue. The epithelium is endometrial in type and occasionally carries a mantle of stroma cells.

The right tube shows chronic inflammation and is distended by old and recent blood clot. The left tube shows fibrosis only.

The ovaries show follicular cysts but no endometriosis.

Commentary.—Localized uterine tumours containing endometrial elements are much more rare than diffuse adenomyosis but cases are described by Haines (1947), Mahfouz (1949) and others. Macroscopic endometrial cysts in the uterus have been described by Gold and Kearns (1946).

Unusual features of this specimen appear to be the great size of the cysts, but superficial attachment, the relative absence of bleeding into them and, microscopically, the paucity of muscular tissue.

According to Novak (1952), "a genuine endometriosis of the uterus, with little or no muscle admixture, is seen in cases in which a pelvic endometriosis attacks the uterus from without, involving most commonly its posterior serous surface and the immediately underlying muscularis, though such a lesion is only a part of a more general pelvic endometriosis". This description seems to fit our specimen but it is interesting that the only evidence of endometriosis apart from the main tumour lies

in the multiple tiny cystic areas seen on the peritoneal surface of the uterus. The absence of endometriosis in the ovaries and its entirely surface but multicentric distribution in the uterus would seem to favour the serosal metaplasia theory of origin, at least in this particular case.

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Adenocarcinoma of the Cervix from a Patient (Gravida V) of 23 Years. Wertheim's Hysterectomy on the Seventeenth Day of the Puerperium.—J. R. E. JAMES, F.R.C.S.Ed., M.R.C.O.G.

Mrs. D. R. had four normal pregnancies and deliveries in 1947, 1949, 1950 and 1952; all four children are alive and well.

The fifth baby was expected on 7.1.54. At 3 a.m. on 9.12.53 (i.e. at the end of the 36th week) the patient had a brisk hæmorrhage *per vaginam*. She was sent into hospital as an emergency antepartum hæmorrhage. The patient had lost "a little every month" and there had been a more or less continuous "watery discharge" throughout the pregnancy. A twin pregnancy was discovered and a presumptive diagnosis of placenta prævia was made. There was another heavy loss two days after admission and on that day (December 11) a lower segment Cæsarean section was performed for placenta prævia. Part of the placenta was in the lower segment posteriorly. The twins were born alive but only survived twenty-four hours.

The loss in the puerperium was more than normal and a little offensive. On the tenth day of the puerperium a fairly heavy hæmorrhage occurred. The cervix was inspected and a large cauliflower growth was found surrounded by a base of uninvaded cervical tissue. I was asked to see the patient, confirmed the above findings and at the same time I removed a piece of growth for section. The section was examined by Professor Jethro Gough who expressed an unequivocal opinion that the growth was an adenocarcinoma.

I carried out a Wertheim's hysterectomy on 28.12.53. Several enlarged lymph nodes were found along both external iliac veins and there were some smaller lymph nodes along the internal veins and in both obturator fossæ. The convalescence was uneventful and the patient was discharged on the sixteenth post-operative day.

Fig. 1 shows the uterine body, cervix, appendages and vagina. The extent of the tumour on the vaginal cervix has been shown by everting the vaginal skin. Fig. 2 shows a typical adenocarcinoma with a variable pattern. There is much polymorph infiltration in most of the tumour. Fig. 3 shows a lymph node with a few metastases in its peripheral lymph sinus. One only of the lymph nodes removed showed metastases.

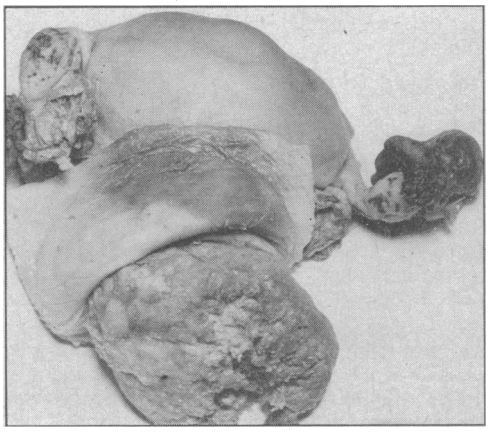

FIG. 1.

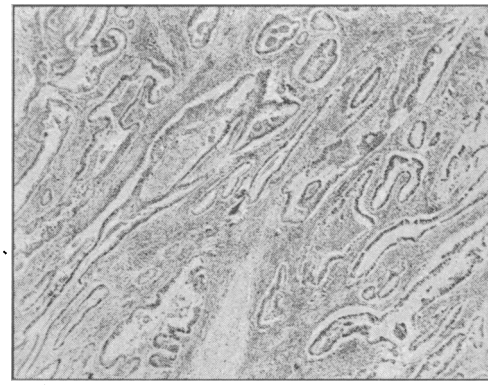

FIG. 2. × 23.

Comment.—The age of the patient is of interest. Maliphant (1949) analysed 1,200 consecutive cases of carcinoma of the cervix treated at the Cardiff Royal Infirmary during the 25-year period 1922–46. At that time the county in which the patient lives was in the catchment area of Cardiff for carcinoma of the cervix. In the youngest age group (20–24) Maliphant reports 5 cases.

The association of cancer of the cervix and pregnancy is reviewed by Munro Kerr and Chassar Moir (1949). The youngest case quoted is aged 23. Munro Kerr and Chassar Moir discuss the

effect of pregnancy on the extension of cancer of the cervix. Doubt is cast on the truth of the statement that cancer of the cervix is more progressive and malignant in pregnancy.

No presentation of a specimen of carcinoma of the cervix in pregnancy would be complete without reference to the cervical tumours closely simulating cancer found on the cervix in pregnancy described by Hill (1948) and Martin and Kenny (1950). In their commentaries, Martin and Kenny focus attention on the ætiology of cancer in general and of cancer in the female tract in particular.

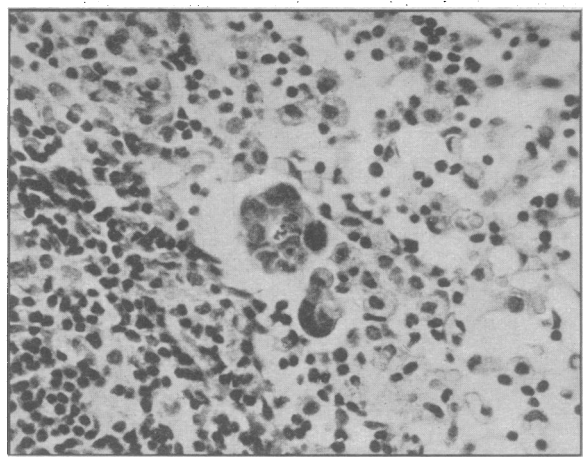

FIG. 3. × 330.

On October 20, 1950, this Section listened to a "Discussion on new ideas about the diagnosis and treatment of placenta prævia". There were lively exchanges of views on vaginal examinations in cases of ante-partum hæmorrhage. There was general agreement that digital exploration of the lower segment would be hazardous. Nevertheless, no harm can come to a case of placenta prævia if the cervix is *gently exposed by a speculum.* Macafee (1945) mentions the gentle use of the speculum. By using a speculum in a case of ante-partum hæmorrhage I saw my first case of carcinoma of the cervix in pregnancy in 1948. The case was dealt with by a Cæsarean Wertheim; mother and child are alive and well.

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Infected Congenital Vaginal Cyst.—ARTHUR CLIFT, F.R.C.S.

History.—Miss M. C., aged 20, complained of an offensive, yellow, vaginal discharge; intermittent over the past four years, more or less continuous for the past four months. She required to wear protection averaging seven sanitary towels daily. She also complained of soreness in the right side of the lower abdomen and found the act of bending limited. She was losing weight. Her periods lasted 11 days every 28, were accompanied by clots and right-sided dysmenorrhœa. There was some frequency of micturition.

On examination.—Heart and lungs and C.N.S. were normal. Abdominal examination: some vague deep tenderness low in the right iliac fossa. She was virgo intacta. Rectal examination revealed a tender cystic mass to the right of the vagina. Under general anæsthesia the intact hymen was incised and on speculum examination the right lateral vaginal wall was found to be distended. About half an ounce of purulent, very offensive, discharge was removed from the posterior vaginal fornix, and on applying pressure to the bulging vaginal wall further pus issued from the right lateral fornix. On bimanual examination a double uterus was discovered. Careful inspection of the vaginal vault failed to reveal any sinus. The cervix was drawn over and fixed in the right vaginal fornix. The cervical canal was dilated but no pus issued from the uterus, thus pyometra was excluded.

Diagnosis.—The possibility of a pelvic abscess pointing in the vagina was considered but there was no supporting history. Apart from the double uterus no abnormality was discovered. The diagnosis of an infected vaginal cyst was therefore reached.

Investigations.—Bacteriological investigation of the vaginal pus revealed a mixed infection, predominantly *B. coli*; tubercle bacilli were absent. E.S.R.—10 mm. in the first hour (Westergren). Hæmoglobin 91% (13·4 grammes/100 ml.). W.B.C. 7,200 (polymorphs. 64%, lymphocytes 34%, monocytes 2%). The menstrual fluids cultured for tuberculosis proved negative. C.S.U. sterile, guinea-pig inoculation—no evidence of tuberculosis. Chest X-ray—no parenchymatous disease. Temperature never rose above 99° F.

As there is a common association between müllerian and wolffian congenital abnormalities the kidneys were investigated and revealed an absence of the right kidney and ureter.

Sodium iodide 13% was introduced into the cyst through a needle and serial X-rays were taken by Dr. Gerald W. Pimblett (Fig. 1).

The abdominal route was chosen for excision of the cyst.

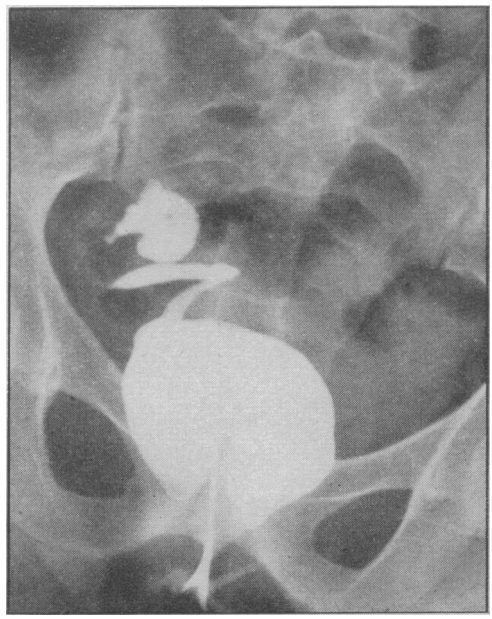

FIG. 1.—An X-ray of the vaginal cyst connected by a sinuous tract to a second cavity—outlined by 13% sodium iodide solution (Courtesy of Dr. Gerald W. Pimblett.)

Operation.—Under general anæsthesia the abdomen was opened. It was confirmed that the right kidney and ureter were absent. The vermiform appendix was found to be congenitally deformed. Double uterus was observed. The right fallopian tube was found to be blind at its lateral end; the left tube patent. Both ovaries were cystic. The right round ligament was clamped and divided and the broad ligament opened. A mass about 1 in. in diameter was first encountered—this was excised and was thought at the time to be remnants of the paroophoron. (Later reflection suggested alternative explanations of this mass: (1) dilatation of wolffian duct, or (2) atrophied kidney.) The cyst was adherent to the cervix and urinary bladder. Removal of the chronic abscess was difficult, and the adherent urinary bladder was unavoidably opened. The bladder was repaired by two purse-string sutures. Difficulty was encountered in introducing a urethral catheter, thought to be due to mechanical blocking of the urethra as the result of suturing the hole in the bladder, and it was therefore thought advisable to drain the bladder suprapubically. The abdomen was closed. A course of penicillin and sulphamezathine was given. Healing was complete within three weeks—vaginal discharge had ceased and normal micturition established.

Pathology.—There was a thick-walled chronic abscess cavity measuring approximately 6 cm. in diameter with an area of vaginal epithelium and a piece of bladder wall. In addition there was a small thick-walled duct situated at the dome of the cyst, close to which was a fistula.

Comments.—In spite of the available clinical, radiological and pathological evidence it is difficult correctly to classify this cyst. A critical analysis of published cases leads one to the conclusion that there are no definite histological findings that can be relied on to determine the ætiology (1–11). In this case both müllerian and wolffian congenital abnormalities were present—a double uterus and absence of the right kidney and ureter.

In favour of the diagnosis of blind vagina (Freund, 1877) was the lateral situation of the cyst to the true vagina; the presence of two uteri and radiologically the apparent connexion of the cyst with a congenital right cervix, uterus and fallopian tube. Sections from various parts of the cyst wall consistently showed a lining of stratified squamous epithelium. The great majority of Gärtner's cysts are lined by a single layer of cubical or columnar epithelium. The fibromuscular wall of the cyst was thick. Against this müllerian hypothesis is the presence of a duct ending in the wall of the vault of the cyst, and in the line of the wolffian duct apparent multiple cysts are seen radiologically. Also no menstrual fluid or blood was obtained from the vaginal cyst.

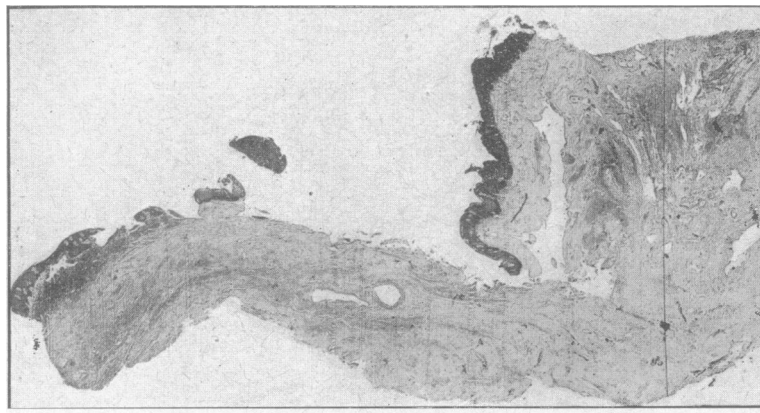

FIG. 2A.

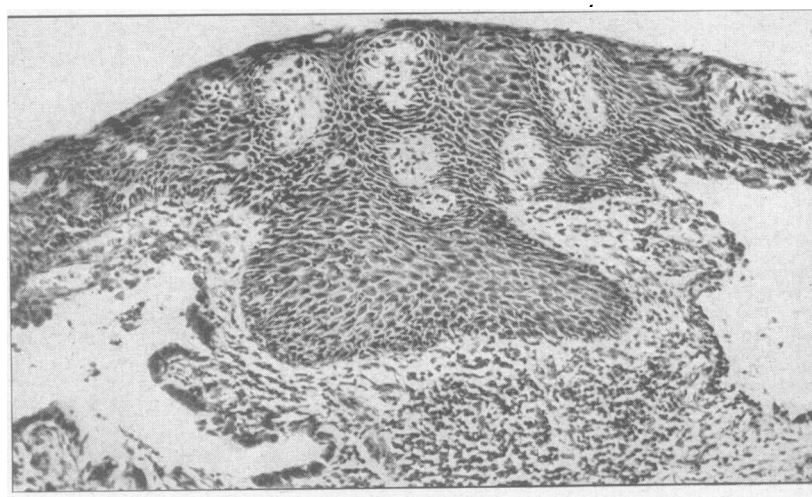

FIG. 2B. × 120.

FIG. 2A and B.—Section of vaginal cyst wall showing smooth muscle and connective tissue. The lining is composed of irregular stratified squamous epithelium, underlying which is an intense chronic inflammatory reaction. A few small ducts lined by columnar epithelium are seen just beneath the epithelium. (Courtesy of Prof. T. Crawford, Drs. A. I. Ross and G. T. Stewart.)

The second possible hypothesis is a Gärtner's cyst—the presence of the duct situated at the dome of the cyst is strongly in favour of this diagnosis. X-ray findings could be interpreted as multiple dilatations in the line of the wolffian duct—the most distal being a Gärtner's cyst. Congenital absence of the right kidney and ureter would also support this theory.

The third possible diagnosis is one of ureterocele, in which case the duct would be ureter—and the proximal cyst part of an otherwise atrophied kidney. In favour of this theory is the fact that the histological features of the duct resemble those of a ureter.

The conclusion is that there is no available irrefutable evidence to lead the author to a definite diagnosis.

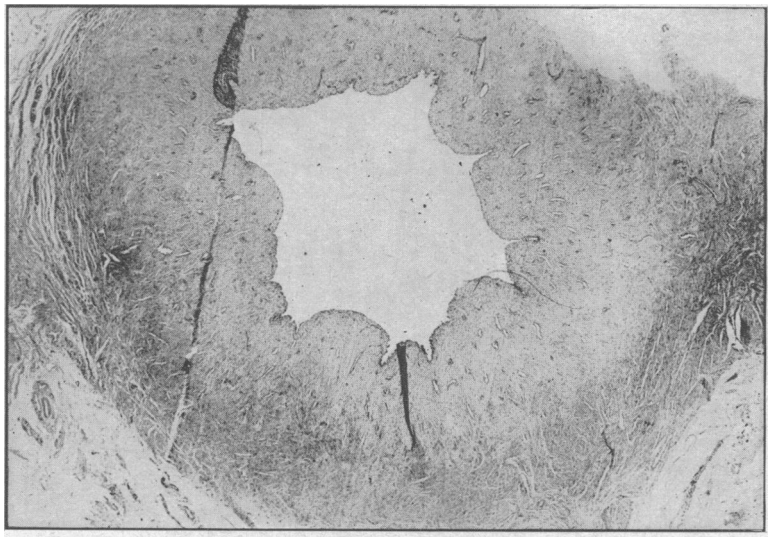

FIG. 3A.

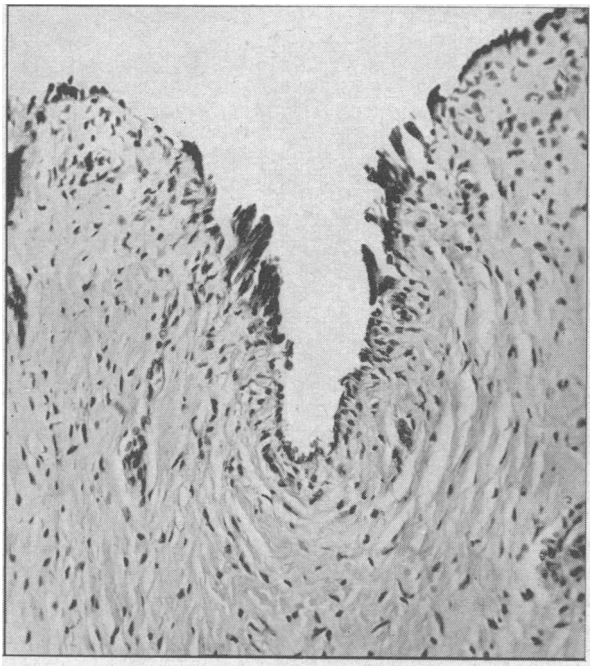

FIG. 3B. × 166.

FIG. 3.—A. Section of the duct ending in the dome of the cyst, showing outer circular and inner longitudinal layers of smooth muscle fibres inside which is a layer of highly vascular connective tissue. The lumen measures 2–3 mm. There is practically no lining epithelium present, but in places there are a few epithelial cells mostly in a single layer; in one place there appears to be stratification suggestive of a transitional type of epithelium.

B. High power showing lining of duct.

(Courtesy of Prof. T. Crawford, Drs. A. I. Ross and G. T. Stewart.)

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A Krukenberg Tumour with No Apparent Primary Growth.—D. H. LEES, F.R.C.S.Ed., M.R.C.O.G.

Mrs. C. T., aged 44, attended the Out-Patient Department of the Jessop Hospital for Women in October 1953, complaining of pain in the left lower abdomen of five months' duration. During that time she had noticed the development of a swelling in the hypogastric region.

Obstetric history.—She had a child aged 6½ and had a miscarriage two and a half years previous to that.

Past history.—In September 1950 this patient had a retrocolic Polya-Hofmeister gastrectomy done for chronic peptic ulceration by Mr. Blacow Yates at the Royal Hospital, Sheffield. The stomach was examined in detail but no evidence of malignancy was found.

On examination.—Her general condition was fair, her hæmoglobin was 82% and her blood pressure 120/70.

A mobile tender mass was felt suprapubically and slightly to the left side and there was free fluid in the peritoneal cavity. On pelvic examination the cervix was slightly open and the uterus itself was displaced forward by a mobile tumour mass which appeared to be ovarian in origin. A diagnosis of ovarian tumour with ascites was made and admission to hospital arranged.

Further pre-operative investigations included a chest skiagram which was normal. Careful examination of both breasts showed no abnormality.

On laparotomy.—Considerable yellow free fluid was found in the peritoneal cavity and bilateral ovarian tumours were disclosed. These were firm and solid with rather a rough surface and typical of Krukenberg tumour. The tumours were free but there was one little nodular area on the peritoneum of the pouch of Douglas. The uterus was slightly enlarged but of normal outline.

Total hysterectomy with removal of both tubes and ovaries was carried out and the nodule from the pouch of Douglas was excised. Following on this a careful survey of the whole abdominal cavity was made. The liver surface, the gall-bladder and the bowel from duodenum to rectum were examined in detail for evidence of a primary growth but nothing was found.

Summary of pathological report (Dr. C. G. Paine).—The ovaries are replaced by solid tumours measuring 95 × 120 × 70 mm. on the right and 120 × 80 × 80 mm. on the left. Both naked eye and histologically these are typical of Krukenberg tumour. In the deeper layers of the endometrium and in the upper part of the cervix, areas of Krukenberg tumour are visible. The nodule from the pelvic floor shows carcinomatous involvement.

Subsequent progress.—The immediate post-operative course was uneventful and in view of the laboratory report she had a course of deep X-ray therapy. On completion of that treatment barium investigation of the alimentary tract was carried out. She had a barium meal and a barium enema but neither screening indicated any abnormality of the bowel. Repeated tests were done for occult blood in the fæces and on two occasions a positive result was obtained.

Comment.—The specimen seems to offer some comment on two open questions regarding these tumours; namely whether they are ever primary, and what is the usual method of spread from the primary to the ovaries. With regard to the first and despite the negative clinical findings in this case the histological sequence bespeaks secondary ovarian involvement. The view is taken that study of the histology must be the criterion and a case like this strengthens the view that a primary growth in the ovary is unlikely. With regard to the method of spread, that was almost certainly lymphatic in this case and the uterine involvement would entail retrograde lymphatic spread from the ovary. It has always been realized that spread from the stomach to the ovary would mean retrograde permeation and the findings here support that opinion.